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AUTHOR Milutinovich, Jugoslav S.; And Others
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ABSTRACT

The authors investigated differences in the job satisfaction and group cohesiveness of blue-collar and white-collar workers under participative and authoritative leadership styles for Negroes and whites. The Job Descriptive Index, Seashore's measure of group cohesiveness, and Likert's "Profile of Organizational Characteristics" were used. Some findings were: (1) both races had higher job satisfaction with work, supervision, co-workers, pay, and promotion under participative than under authoritative leadership style; (2) the more participative the leadership style the higher group cohesiveness; (3) there is substantially high correlation between supervisory style and group cohesiveness; (4) the highest correlation was between leadership style and job satisfaction with supervision and between group cohesiveness and co-workers; (5) the most powerful discriminant variable between Negro and white blue-collar and white-collar workers was followed by promotion, supervision, and group cohesiveness; (6) race tends to have limited influence on the job satisfaction of workers, but the study showed greater differences between Negroes and whites in relation to their jobs; and (7) in general there was substantial positive correlation between determinants of job satisfaction, leadership style, and group cohesiveness. (Author)

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A STEPWISE DISCRIMINANT ANALYSIS OF JOB SATISFACTION AND GROUP COHESIVENESS OF BIRACIAL BLUE AND WHITE COLLAR WORKERS

by

Jugoslav S. Milutinovich
Ury M. Gluskinos
Richard H. Viola

Temple University
Philadelphia, Pa.

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A STEPWISE DISCRIMINANT ANALYSIS OF JOB SATISFACTION AND GROUP COHESIVENESS OF BIRACIAL BLUE AND WHITE COLLAR WORKERS

Recent empirical research suggests that there are personality, socio-cultural, and psychophysical similarities as well as differences between Negroes and whites (Pettigrew, 1964; Dreger and Miller, 1960, 1968; Killens, 1965; Lincoln, 1968; Jensen, 1968; Gluskinos, Toth, and Pond, 1970). Other researchers have indicated that human behavior in general and the perception of job satisfaction, group cohesiveness, and supervisory style by employees in particular is a function of interaction between environment and the person (Morse, 1953; Sells, 1963; Vroom, 1964; Pervin, 1968; Friedlander and Margulies, 1969).

The major objective of this study was to learn the order in which six variables dealing with job satisfaction, group cohesiveness, and leadership style contributed to explanation of the differences between Negro and white blue-collar and white-collar workers. Four of the variables were measures of different aspects of job satisfaction (work, supervision, co-workers, and promotion). The remaining two were group cohesiveness and leadership style. Likert (1967) and Vroom (1960, 1964) have maintained that there is a direct relationship between attitude toward the job and degree of participation. Further Haythorn (1956) in a small group study has shown a relationship between satisfaction and group leadership style. Thus, the intercorrelation between job satisfaction, leadership style, and group cohesiveness was investigated.

Although many studies reported similarities and differences between races there is only one study of job satisfaction dealing with Negro and white blue-collar workers. Bloom and Barry (1967) concluded that

> The 2-factor theory may be too simple to encompass the concept of satisfaction and dissatisfaction, at least in the blue-collar Negro. It may be that the 2-factor theory is less useful when one considers low status work. (p. 291)

Concerning group cohesiveness, Katz and Benjamin (1960) found that "Negroes favored one another as future working companions while whites showed no bias . . . they were more susceptible to group influences than were whites" (passim pp. 454-456). Research dealing with race and leadership style has not been reported in the literature. The research being reported here simultaneously investigates:

(a) The order in which such variables as work, supervision, co-workers, promotion, group cohesiveness, and leadership style contributed to the explanation of differences between Negro and white blue-collar and white-collar workers.

(b) The interrelationship between group cohesiveness, supervisory style, and the determinants of job satisfaction (work, supervision, co-workers, pay, promotion, and total job satisfaction).

No hypothesis was stated concerning the ability of the different variables to explain differences between groups. However, the following Hypotheses concerning relationships among leadership style, group cohesiveness, and job satisfaction were tested by use of a correlation analysis (data presented in Table 2):

Hypothesis 1: The more participative the supervisory style the higher total job satisfaction and job satisfaction on each of the five factors.

Hypothesis 2: The more participative the leadership the higher group cohesiveness.

Hypothesis 3: The higher group cohesiveness the higher total job satisfaction and job satisfaction on each of the five factors.

Hypothesis 4: Supervision is the job satisfaction variable which will be most highly related to leadership style.

Hypothesis 5: Co-workers is the job satisfaction va iable which will be most highly related to group cohesiveness.

METHOD

The sample consisted of 276 Negroes and 761 white workers from three organizations. Organization A which represented 44 percent of the total sample was a footwear factory in Massachusetts. Organization B* represents 42 percent of the total sample was a water department in a large eastern city. Organization C represents the 14 percent of the sample and was a small metal processing plant in Pennsylvania.

The Job Descriptive Index (JDI) developed by Smith et al. (1969) was used to measure job satisfaction. Seashore's (1954) measure of group cohesiveness was also used. In order to obtain data on organizational characteristics several presumed causal variables from Likert's (1967) "Table of Organizational Variables" were selected. Questionnaires were administered on company time and anonymity was guaranteed. The response rate was 95 percent.

A stepwise discriminant analysis was undertaken to determine the relative contribution of the six selected variables to the differences among groups. In order to test the hypotheses correlations were computed to determine relationships between variables.

RESULTS

Data presented in Tables 1 and 2 indicate the following:

(a) Satisfaction with work was found to be the most powerful discriminant variable (F ratio = 31.76). The white white-collar workers were the

*It was not possible to collect data on pay in Organization B because negotiations with the union for extension of the union contract had already started. Data on pay are from Organizations A and C only.

most satisfied. The white blue-collar workers were the least satisfied. Negro white-collar and Negro blue-collar workers showed almost identical job satisfaction but they were less satisfied than white white-collar employees but more satisfied than white blue-collar employees.

(b) The second most important discriminant variable was promotion. However, on this variable the most satisfied were Negro blue-collar workers while the least satisfied were the white blue-collar workers. Negro white-collar workers were less satisfied with promotion than white white-collar workers but more satisfied than white blue-collar workers.

(c) The third most powerful discriminant variable was satisfaction with supervision. Negro blue-collar workers were the least satisfied while the white white-collar workers were the most satisfied workers. Negro white-collar employees were less satisfied with supervision than white white-collar employees but more satisfied than white blue-collar workers. Blue-collar workers of both races were less satisfied with supervision than white-collar workers of both races.

(d) Negroes perceived their work groups as significantly less cohesive than whites perceived their work groups. However, there was no significant difference in the perception of group cohesiveness between Negro blue-collar and Negro white-collar workers and between white blue-collar and white white-collar employees.

(e) There was no significant difference in job satisfaction with co-workers regardless of the race and type of job.

(f) The variable which contributed relatively little to differences among the groups was leadership style. Although the F ratio for this particular variable measured independently from other variables was very high (F ratio = 11.69) in the stepwise discriminant analysis the other five variables apparently accounted for almost all the differences among the four groups.

(g) Data presented in Table 2 support Hypothesis 1 since there was a relatively high correlation between leadership style and total job satisfaction as well as between leadership style and all five determinants of job satisfaction.

(h) Of particular interest was the substantial relationship between leadership style and group cohesiveness (r = .46). Thus the data support Hypothesis 2.

(i) Hypothesis 3 is supported by the findings since there was a high correlation between cohesiveness and determinants of job satisfaction and between cohesiveness and total job satisfaction.

(j) The highest correlation between leadership style and job satisfaction is with supervision (r = .68) which supports Hypothesis 4.

(k) The highest correlation between group cohesiveness and job satisfaction was with co-workers (r = .43) which supports Hypothesis 5.

(l) Concerning total job satisfaction the data indicate that Negro blue-collar and Negro white-collar workers have almost identical total job satisfaction. White blue-collar workers are less satisfied than Negro blue-collar workers while white white-collar workers are more satisfied than Negro white-collar workers.

CONCLUSIONS AND IMPLICATIONS

Analysis of the data indicated that race and type of job influence job satisfaction of workers. Negroes apparently possessed different frames of reference as evidenced in their scores on work, promotion, supervision, and cohesiveness. In explaining the differences between Negro and white blue-collar and white-collar workers, the most powerful discriminant variable was work, followed by promotion,

supervision* and group cohesiveness. Leadership style was a powerful discriminant variable when used by itself. It separated groups very well. However, leadership style failed to provide a powerful explanation for differences between groups when used in the stepwise discriminant analysis. The other four variables explained and accounted for those differences. Its failure to contribute much to the discriminant analysis was probably due to its high correlation with the remaining variables (i.e. supervision and work).

Differences between Negro and white blue-collar and white-collar workers may be explained by the difference between level of aspiration and level of achievement (Evans, 1969). It may also be accounted for by differences in personality-environment interactions, especially in the perceived characteristics of work, which was found to be the most discriminant variable. Although the other three variables, i.e., promotion, supervision, and group cohesiveness had less discriminating power than work, they were shown to have a significant effect on the differences in attitudes between Negroes and whites occupying different types of jobs.

Negroes' perception of relatively low cohesion (compared with whites) in their work groups may indicate feelings of less integration into work groups. The very high and similar job satisfaction levels of both Negroes and whites with co-workers detracts from such explanation, however.

Hypothesis 1 was supported by the findings and this study tends to confirm a pervasive positive relationship between leadership style and job satisfaction. The more participative leadership, the higher job satisfaction with work, supervision, co-workers, pay, promotion and total job. Data also supported Hypothesis 2 since there was a strong effect between group cohesiveness and leadership style.

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*It should be noted that analysis of the data by race and type of job has shown differences in job satisfaction with work, supervision, and promotion. Stratification by race only resulted in lower job satisfaction scores for Negroes than for whites with supervision and higher satisfaction of Negroes than whites with promotion. Thus, job satisfaction with work, pay, co-workers, and total job satisfaction was not affected by race. Race alone (without stratification by type of job) tends to have only limited influence on the job satisfaction of employees, since similarities in job satisfaction are much greater than differences. For more information see Milutinovich (1970).

The more participative leadership, the higher group cohesiveness (r = .46) and vice versa. Hypothesis 3 was supported by the findings since there was a high positive correlation between group cohesiveness and job satisfaction. Thus, the more cohesive the work group, the more satisfied the worker was with work, supervision, co-workers, pay, promotion, and total job. In sum, concerning the first three Hypotheses it can be stated that there was a high positive correlation between leadership style, group cohesiveness, and job satisfaction.

Hypotheses 4 and 5 were also supported by the findings since the highest correlation was between leadership style and job satisfaction with supervision (r = .68) and between group cohesiveness and job satisfaction with co-workers (r=.43) respectively. Smith et al. (1969) went to great lengths detailing the convergent and discriminant validity of their JDI measure. This study provides evidence of the construct validity of the JDI. If the satisfaction with co-workers scale really measures satisfaction with co-workers, then one would expect that its correlation with a measure of cohesiveness would be higher than the cohesion measure with any other satisfaction scale (work, supervision, pay, or promotion). This was exactly the case. Further, one would expect that the correlation between leadership style and satisfaction with supervision would be higher than the correlation of leadership style with any other satisfaction variable. Again, that was precisely the outcome.

If high correlations among job satisfaction, group cohesiveness, and leadership style are substantiated by further research, they should be taken into consideration by behavioral scientists studying organizational behavior. Results from this study leads one to hypothesize that participative leadership style might lead to high group cohesiveness and high job satisfaction which in turn leads to lower absences and turnover. However, this relationship must be experimentally investigated.

TABLE 1. STEPWISE, DISCRIMINANT ANALYSIS OF NEGRO AND WHITE BLUE-COLLAR AND WHITE-COLLAR WORKERS

Step Number	Variable Entered	Negroes		Whites		F Values of Entering Variable	F Values for each Individual Variable Analyzed Separately
		Blue-col. Mean Scores (n=211)	White-col. Mean Scores (n=65)	Blue-col. Mean Scores (n=500)	White-col. Mean Scores (n=261)		
1	Work (JDI)	28.2	30.2	26.3	35.3	31.74*	31.76*
2	Promotion (JDI)	23.9	17.6	14.9	22.0	14.98*	20.48*
3	Supervision (JDI)	34.2	38.9	36.6	42.4	10.09*	17.85*
4	Cohesiveness	13.9	13.5	14.5	14.8	8.98*	5.53*
5	Co-workers (JDI)	39.3	36.4	38.3	40.5	1.33	2.33
6	Leadership style	20.9	21.9	21.1	24.1	0.29	11.69*
--	Total Job Sat. (JDI)	125.4	125.1	115.0	139.67	----	17.32*

* $p < .001$

TABLE 2. CORRELATION BETWEEN JOB SATISFACTION AND GROUP COHESIVENESS AND BETWEEN JOB SATISFACTION AND LEADERSHIP STYLE

Variable	Pearson Correlation Coefficient*	
	Cohesiveness N = 1053	Leadership Style N = 1053
Work	.37	.47
Supervision	.36	.68
Co-workers	.43	.33
Pay	.18	.30
Promotion	.23	.37
Total Job Satisfaction (N=603)	.49	.57
Leadership Style	.46	---

*All correlations are at least significant at the .01 level.

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